NEW RECORDS FOR *THYREODON* FROM SOUTH TEXAS (HYMENOPTERA, ICHNEUMONIDAE)

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Since 1973, I have been surveying the Hymenoptera of the lower Río Grande Valley of south Texas[1] and have established the presence there of *Thyreodon niger,* heretofore reported only from México and Guatemala (Townes, 1966, p. 190). Concurrently, Dr. James E. Gillaspy of Texas A. & I. University at Kingsville has loaned me for identification a series of Texan ichneumonids, containing not only additional material of *niger* but also two specimens of *T. laticinctus,* another Neotropic *Thyreodon* previously unrecorded north of México (Townes, 1966, p. 189).

The present contribution offers taxonomic and ecological notes on *niger* and *laticinctus* as well as brief discussion of the other U.S. *Thyreodon.*

Genus *Thyreodon* Brullé

The following combination of characters will separate this genus from all other New World ichneumonids:

Large to very large species, length of fore wing 16–28 mm.; apex of clypeus broadly triangular and reflexed; maxilla and labium about 0.4 as long as height of head; first intercubitus joins cubital vein far distad of second recurrent; second brachial cell with a long spurious vein that borders all or most of its hind edge; nervellus broken near upper 0.3; propodeum strongly inflated basally, so that the spiracle is situated in a deep depression; spiracle of first gastric tergite well behind middle; gaster strongly compressed.

Thyreodon is an excusively New World genus of very large and conspicuous ichneumonids belonging to the Tribe Enico-

[1]*Acknowledgements:* My Texas fieldwork currently is supported by a U.S. National Science Foundation Grant (DEB 75-22426) and from 1973 to 1975 was made possible by grants from the Committee for Research and Exploration of the National Geographic Society.

Manuscript received by the editor December 7, 1976.

spilini of the Subfamily Ophioninae. Townes (1966, p. 185–191) lists 24 species for the Neotropic Region but only three species currently are cited from America north of México (Hooker, 1912, p. 122; Muesebeck, Krombein and Townes, 1951, p. 401). Of these latter, *T. atricolor* inhabits the whole eastern U.S. and southern Canada and also has been recorded from Arizona, *T. fernaldi* is known from Colorado and Arizona, and *T. ornatipennis* from New Mexico.

T. atricolor has been reared from sphingid moths of the genera *Lapara* and *Paonias* (Hooker, 1912, p. 120–121). There are no host records for other *Thyreodon* but their large size makes it probable that they likewise attack sphingid or similar bulky lepidopterous larvae.

Many *Thyreodon* occur in subtropical or tropical forests, usually below 2000 m., but quite a few species also extend into deciduous forest, thorn scrub, savannas, and other drier habitats. Their ability to adapt to climates more arid than those favored by most ichneumonids probably explains the penetration of *T. niger* and *T. laticinctus* into the subtropical thorn scrub and semidesert of south Texas.

KEY TO THE SOUTH TEXAS *THYREODON*

1. Black with flagellum mostly yellow and gastric tergites 3–4 largely ferrugineous; notaulus defined as a very shallow band of relatively fine puncto-reticulation, with a weak and appressed crest at front end; mesopleuron finely and densely punctate throughout; hind face of propodeum uniformly reticulate with only faint traces of a median channel and lateral depressions .... 1. *T. laticinctus.*

   Almost entirely black; notaulus strongly impressed and coarsely foveolate, with a conspicuously raised crest at front end; mesopleuron uniformly smooth, polished, and practically impunctate; hind face of propodeum with a deep, transversely wrinkled median longitudinal channel and two broader and shallower but also strongly trans-rugose lateral depressions, which are separated from the median channel by a pair of broad and high, mostly smooth and polished longitudinal elevations .... 2. *T. niger.*

1. *Thyreodon laticinctus* Cresson
(Fig. 1)

MATERIAL EXAMINED: 2 females, TEXAS (*Kleberg County:* Kingsville, 10 September 1972, P. W. Treptow; 30 September 1970, W. F. Granberry). (In collection of Texas A. & I. University, Kingsville, Texas).

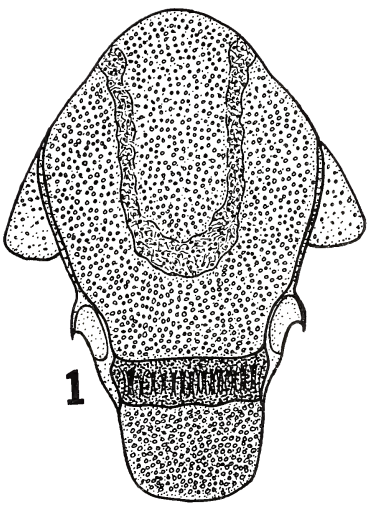
In addition to the key characters, *laticinctus* differs from *niger* in its convex temples which in females are 0.87–1.0 as long as the eye in lateral view; differently shaped prescutellar ridge (Fig. 1); more dorsally intercepted postnervulus (lower abscissa 2.3–2.5 as long as upper); and larger size (length of fore wing 23.3–23.6 mm.).

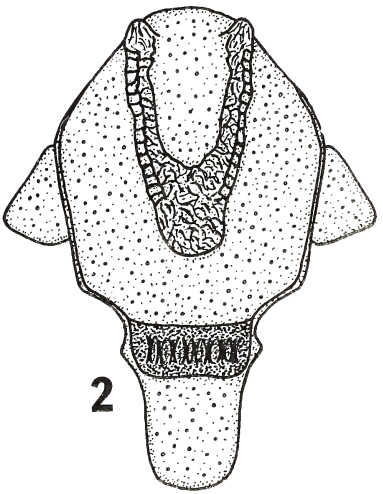
It ranges from south Texas to Bolivia and may occur in almost any habitat from rainforest to semidesert. I have collected *laticinctus* at Tingo María, Perú in lush tropical wet forest and once observed but failed to catch it at the Bentsen Río Grande Valley State Park near Mission, Texas. It tends to fly near the ground but at great speed and thus is hard to net, in spite of its conspicuousness and exceptional size.

2. *Thyreodon niger* Cresson
(Fig. 2, 3)

MATERIAL EXAMINED: 6 females and 1 male, TEXAS (*Hidalgo County:* Bentsen Río Grande Valley State Park, 1–9 September 1976, C. C. Porter; Valley Botanical Garden at McAllen, 16–31 May 1974, C. C. Porter; *Kleberg County:* Kingsville, 27 April 1970, P. M. Kalisek, 19 September 1969, C. L. Zassow, "Site 55", 21 September 1973, Gillaspy and party; *Starr County:* Río Grande City, 2 August 1975, J. E. Gillaspy). (In Collection of Texas A. & I. University, Kingsville, Texas and Collection of Charles C. Porter, 301 N. 39th Street, McAllen, Texas.)

Niger differs from *laticinctus* in several characters besides those mentioned in the key. The temples are receding and viewed laterally measure 0.70–0.75 as long as the eye in females and 1.0 as long in males; the prescutellar ridge is of different conformation (Fig. 2); the postnervulus is more ventrally intercepted (lower abscissa 1.0–1.4 as long as upper); and the average size is smaller (length of fore wing 16.0–17.6 mm.).





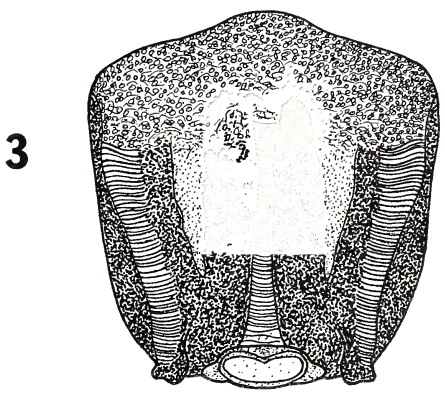


Fig. 1 *Thyreodon laticinctus* Cresson, female. Dorsal view of mesonotum showing weakly impressed and finely rugulose notauli and peculiarly modified prescutellar ridge.

Fig. 2 *Thyreodon niger* Cresson, female. Dorsal view of mesonotum, showing deeply impressed, coarsely foveolate notauli, raised crest at anterior end of notauli, and unmodified prescutellar ridge.

Fig. 3. *Thyreodon niger* Cresson, female. Posterior view of propodeum, showing the median and lateral channels.

The median channel and lateral depressions on the apical face of the propodeum are an unusual feature. Evidently, they are structures which receive the first gastric segment and the basal part of the legs, when these are elevated and folded backward. Observation of living specimens eventually may show that this has adaptive significance in oviposition, courtship, mating, or warning behavior.

Niger ranges from Kleberg County, Texas to Guatemala and has been recorded most often from México. In south Texas it inhabits semiarid scrub as well as the more humid woodlands of the lower Río Grande Valley. It flies slowly close to the ground, usually among herbaceous vegetation in partial shade of trees or shrubs. At McAllen I have collected *niger* in a grove of *Celtis lindheimeri* and at Bentsen Río Grande Valley State Park in a humid thicket dominated by *Pithecellobium flexicaule.*

Although *laticinctus* and *niger* are the only *Thyreodon* definitely recorded from Texas, ranges of the other U.S. species are such that all may enter some part of the state.

T. atricolor Olivier extends from the "Atlantic to Manitoba, Minnesota, Iowa, and Missouri in the Transition and Upper and Lower Austral Zones" and occurs also in "Kansas and Arizona" (Muesebeck, Krombein, and Townes, 1951, p. 401). Examination of material from the eastern United States shows that this species agrees with *laticinctus* in most characters studied but lacks a ferrugineous band on the gaster, has the notauli a little stronger, and the propodeum very coarsely reticulate but rather shining with a pronounced median channel on the hind face (in *laticinctus* the propodeum is more finely and opaquely wrinkled with a faintly impressed posterio-median channel). Eastern populations of *atricolor* show almost uniformly dark wings and body but those from Iowa west often have the head and mesosoma partly brownish and the wings more or less variegated with yellow.

I have not examined specimens of *T. fernaldi* Hooker but the literature suggests that this species may belong to the same group as *laticinctus* and *atricolor.* Because of its more or less ferrugineous gastric tergites 2–5 and finely reticulate, at most faintly channeled propodeum, *fernaldi* especially resembles *laticinctus* but differs conspicuously by having "fuliginous wings, with the basal 2/3 of the anterior and a small spot on the posterior fulvous or fulvo-fuscous" (Hooker, 1912, p. 131). *Fernaldi* ranges from

Colorado and Arizona to México and thus may be looked for in west Texas.

No material of *ornatipennis* Cresson was available for study but Hooker's description (1912, p. 122) shows it to be distinctive in its almost uniformly reddish brown ground color, "fuliginous wings with a fulvo-hyaline spot extending across the middle and sometimes occupying most of the base", deep notauli, and finely reticulate propodeum with an apico-median channel. This species is known only from Orizaba, México and from an unspecified locality in "New Mexico". It also may occur in west Texas.

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